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Importance of Compton scattering for radiation spectra of isolated neutron stars

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Abstract

Model atmospheres of isolated neutron stars with low magnetic field are calculated with Compton scattering taking into account. Radiation spectra computed with Compton scattering are softer than computed with Thomson scattering at high energies (E>5 keV) for hot (T eff>10 6 K) atmospheres with hydrogen-helium composition. Compton scattering is more significant to models with low surface gravity. Compton scattering is less important to models with solar abundance of heavy elements. © Springer Science+Business Media B.V. 2007.

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Keywords

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